

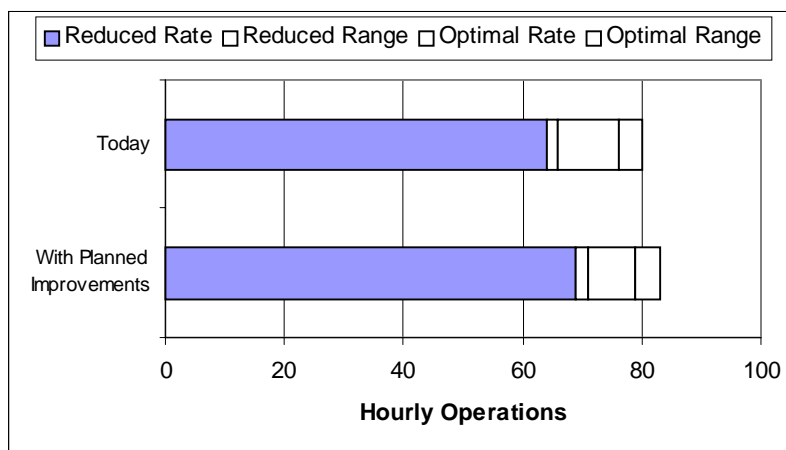
## Washington-Ronald Reagan National Airport Benchmarks

- The current capacity benchmark at Reagan National today is 76-80 flights per hour in good weather.
- Current capacity falls to 62-66 flights (or fewer) per hour today in adverse weather conditions, which may include poor visibility, unfavorable winds or heavy precipitation.
- Half of the time during adverse weather, only the main runway can be used which reduces capacity to approximately 45 operations per hour.
- Scheduled traffic at Reagan National exceeds good weather capacity, for about 1 hour per day and in adverse weather capacity about 4 hours per day.
- Overall, about 1% of the flights at Reagan National is significantly delayed (more than 15 minutes).
- Technology and procedural improvements are expected to improve Reagan National's capacity benchmark by 4% (to 79-83 flights per hour) for good weather conditions, and by 8% (to 67-71 flights per hour) for adverse weather conditions over the next 10 years.
- These capacity increases could be brought about as a result of:
  - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes, which allow a more consistent flow of aircraft to the runway.
- These improvements may be more than offset by reduced use of the shorter, crosswind runway as turboprop aircraft are replaced by regional jets, and growth in operations over the next 10 years.
- Demand is expected to grow by 4% over the same period. This growth should be at Reagan National without causing a significant increase in delays.
- The benchmark values assume continued use of Runways 04/22 and 15/33. Any change in the fleet mix that reduces the number of aircraft able to use these runways will reduce the overall capacity of the airports.

## Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

| Scenario                  | Optimum Rate | Reduced Rate |
|---------------------------|--------------|--------------|
| Today                     | 76-80        | 62-66        |
| New Runway                | NA           | N/A          |
| With planned improvements | 79-83        | 67-71        |



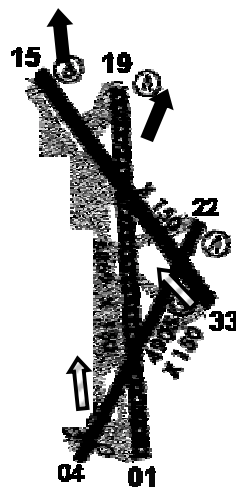
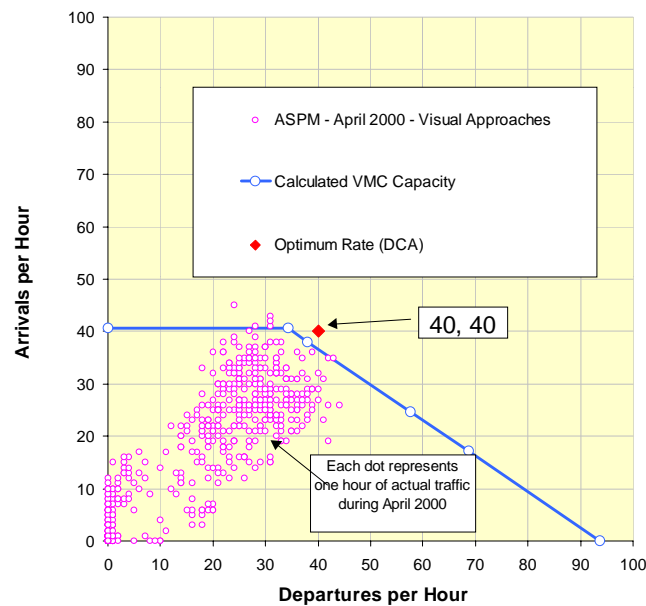
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
  - Taxiway and gate congestion, runway crossings, slot controls, construction activity
  - Terminal airspace, especially limited departure headings
  - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

*These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.*

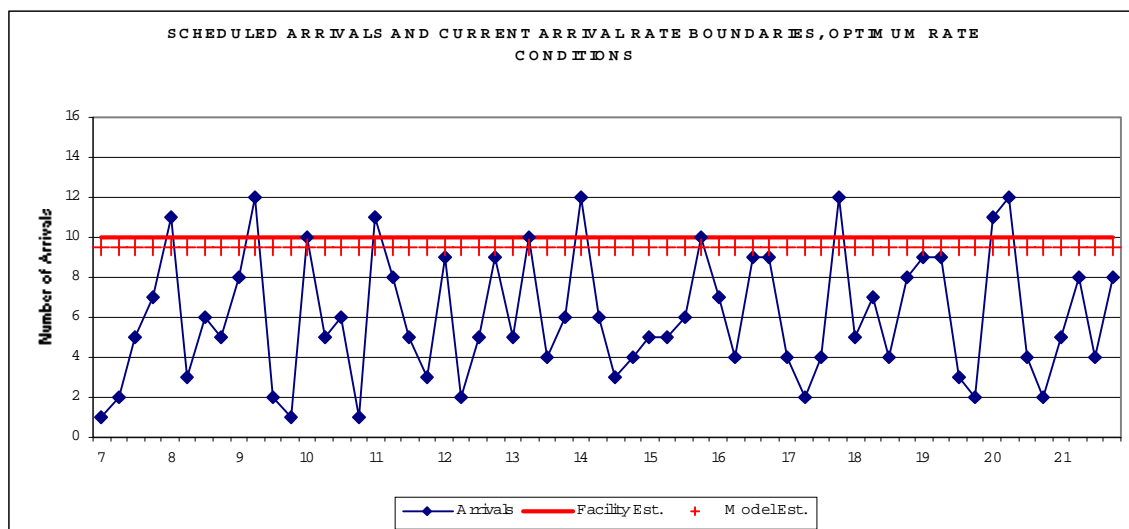
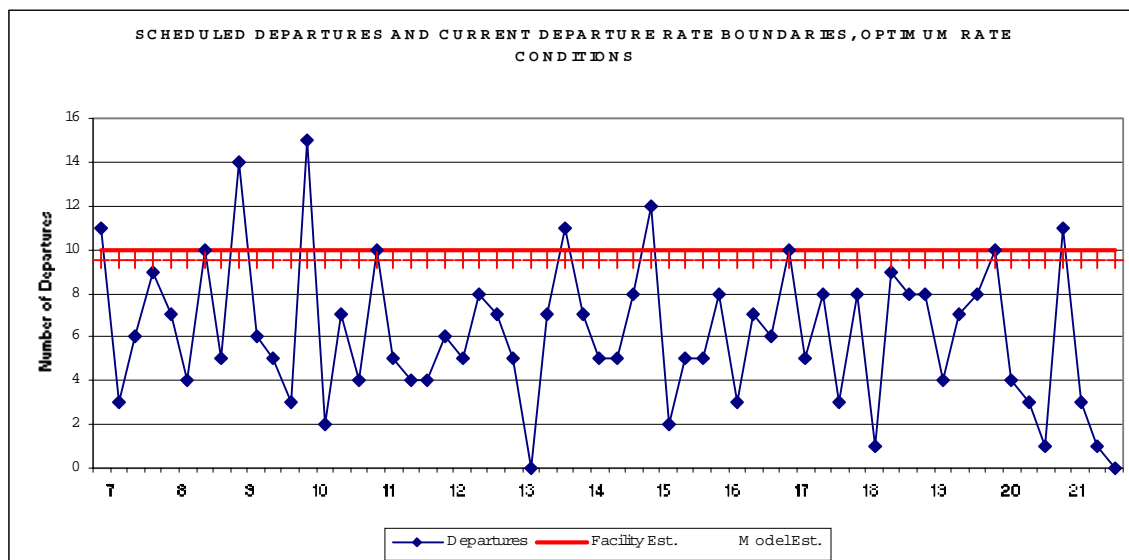
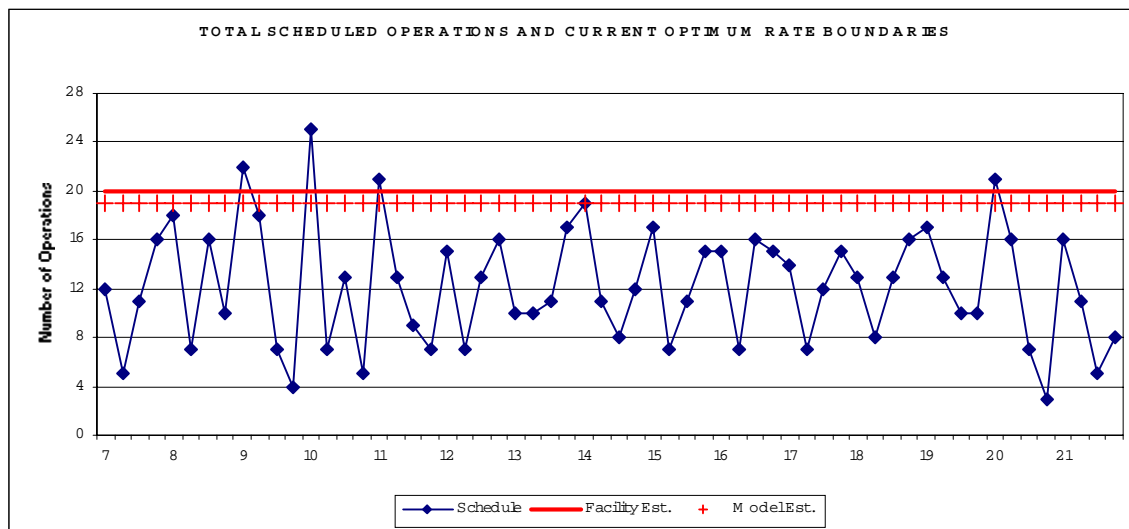
**The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.**

## Current Operations – Optimum Rate

- Visual approaches, visual separation
  - Optimum Rate of (40,40) was reported by the facility
  - Arrive and Depart on 01, and as traffic permits, on 33 or 04
- DCA is a slot-controlled airport; consequently the number of operations remains relatively constant compared to airports where there are no slots.
- ASPM data are actual hourly traffic counts for the month of April 2000 for Visual Approach conditions. These data include other runway configurations and off-peak periods.
- Solid line represents the airport capacity during a busy hour calculated by the FAA Airport Capacity Model, showing the tradeoff between arrival and departure rates
- The capacity model can only approximate the complex operations at DCA

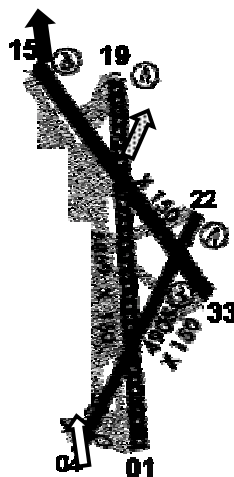
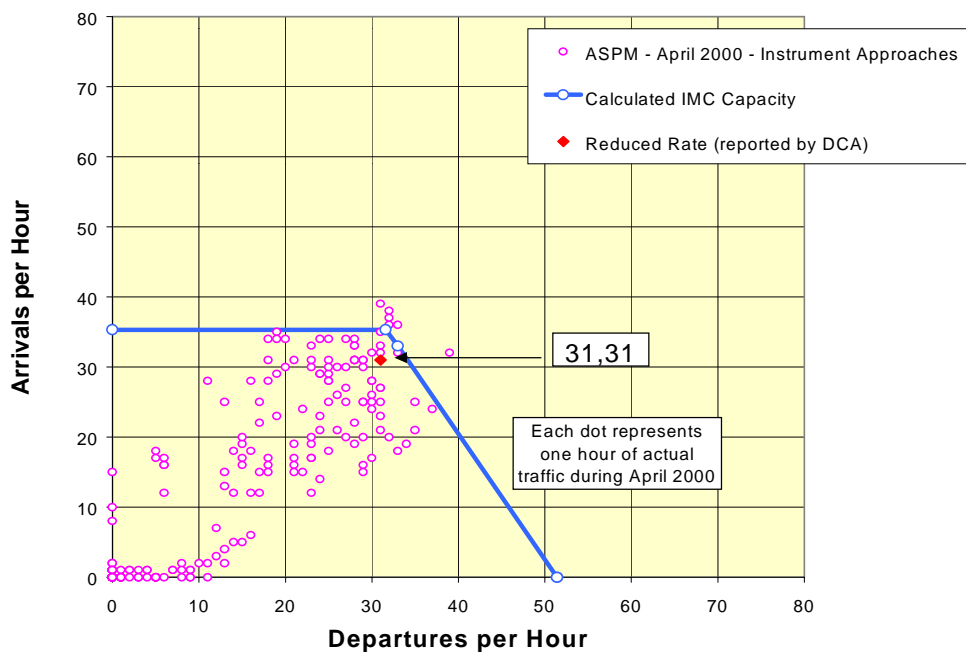


## Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions



## Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
  - Arrive 01, Depart 01
  - As Traffic permits, circle to land on 33 or 04
- DCA is a slot-controlled airport; consequently the number of operations remains relatively constant compared to airports where there are no slots.
- Reduced Rate of (32,32) was reported by the facility
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates
- Chart below represents observed traffic and expected rates in terms of operations per hour



## Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions

